

**REPORT TO THE TWENTY-THIRD LEGISLATURE  
STATE OF HAWAII  
2005**

**PURSUANT TO SECTION 340B-12, HAWAII REVISED STATUTES  
REQUIRING THE DEPARTMENT OF HEALTH TO PROVIDE  
AN ANNUAL REPORT OF THE ACTIVITIES OF THE  
BOARD OF CERTIFICATION OF OPERATING PERSONNEL IN  
WASTEWATER TREATMENT FACILITIES**

**PREPARED BY:  
STATE OF HAWAII  
DEPARTMENT OF HEALTH  
DECEMBER 2004**

# **BOARD OF CERTIFICATION OF OPERATING PERSONNEL IN WASTEWATER TREATMENT PLANT FACILITIES**

## **EXECUTIVE SUMMARY**

The Board of Certification of Operating Personnel in Wastewater Treatment Plants (hereafter, the Board) conducted six (6) meetings during the year.

Operator certification examinations were administered by Board members statewide in February and August to 104 operators, with 19 successfully passing the examinations, for an overall passing rate of 18 percent. Hawaii's 2004 passing rate was lower (18 vs. 31 percent) than the previous year. The passing rates for Grades 3 and 4 are typically lower than for Grades 1 and 2. Passing rates for each grade have fluctuated over the years.

There are presently a total of 426 certified wastewater treatment plant operators in Hawaii. 420 have permanent certifications and six (6) have conditional operator certificates.

The Board and the Statewide Wastewater Operator Training Center Board of Directors have been meeting annually as a means of improving both the training and certification programs.

Significant Board actions include:

- Reviewing all applications for examinations;
- Conducting two examinations annually;
- Classifying treatment plants;
- Evaluating applications for issuing reciprocity certifications;
- Evaluating operator college transcripts, outside training courses, and workshops for granting continuing educational units (CEUs);
- Implementing HAR, Chapter 11-61, rules for the mandatory certification of personnel in wastewater treatment plants;
- Issuing permanent and temporary certificates; and
- Reviewing the operating budget.

### **Funding Source for the Board**

Act 238, SLH 1999 amended Chapter 340B, Hawaii Revised Statutes (HRS) which established the Wastewater Treatment Certification Board (WTCB) Special Fund. The revenues for this fund are generated from monies collected for registration, renewal, reciprocity and temporary certificate fees and are to be used specifically for defraying the costs of the operations of the Board. At the end of the fiscal year, a cash balance of \$33,765.71 existed in the fund.

# **2004 ANNUAL REPORT**

## **BOARD OF CERTIFICATION OF OPERATING PERSONNEL IN WASTEWATER TREATMENT FACILITIES**

### INTRODUCTION

Effective operation and maintenance of wastewater treatment works are essential to prevent pollution of the waters of the state. Also, efficient management of wastewater treatment works is an important economic asset to the public, to county and state officials, and to operators. Furthermore, certification of wastewater treatment works operators assures the employment of personnel competent to provide proper operation and maintenance, and efficient management of wastewater treatment works.

### ORGANIZATION

This Annual Report summarizes the Board's activities and accomplishments during 2004. It also provides information about the Board's organizational structure.

#### Organizational Structure

Members of the Board are appointed to a four-year term. The Board is comprised of the following members:

Allen Souza	- Chair, Operator, County of Maui
Marshall Lum	- Secretary, State Department of Health
Wayne Salas	- Operator, City & County of Honolulu
Myron Nomura	- Professional Engineer in private practice
Mansfield Dacay	- Operator, County of Kauai
Charles Dawrs	- Operator, County of Hawaii
P.Y. Yang	- Ph.D., University of Hawaii
Victor Moreland	- Operator, private sector
Eassie Miller	- HWEA representative

During the year, the Board was assisted by Joslynne Camlin, clerk/typist, and Dwight Nakao, Administrator of the Statewide Operator Training Center who are assigned to the Wastewater Branch, State Department of Health. Ms. Camlin and Mr. Nakao resigned from their positions in October 2004. Their positions are currently vacant. Additionally, Harold Yee, Chief of the Wastewater Branch, State Department of Health oversees the funding of the Board.

## BOARD MEETINGS DURING 2004

During the calendar year, the Board held six meetings on:

January 8-9  
March 12

May 14  
July 8-9

September 24  
November 5

## SUMMARY OF CERTIFICATION EXAMINATIONS

The Board conducted two examinations statewide for all grades of wastewater treatment plant operators during 2004. The first in February 2004 and the second in August 2004. The results of these examinations are depicted in the following tables:

### **February 2004 Examination**

<b>Grade</b>	<b>Pass</b>	<b>Applicants</b>	<b>Passing %</b>
1	2	6	33
2	3	9	33
3	0	11	0
4	4	27	15
Total	9	53	17

### **August 2004 Examination**

<b>Grade</b>	<b>Pass</b>	<b>Applicants</b>	<b>Passing %</b>
1	2	5	40
2	0	6	0
3	7	16	44
4	1	24	4
Total	10	51	20

## COMPARISON OF PASSING PERCENTAGES

### Statewide

Date of Exam	Grade 1	Grade 2	Grade 3	Grade 4
August 2004	40	0	44	4
February 2004	33	33	0	15
August 2003	80	45	32	16
February 2003	50	63	13	16
August 2002	73	53	17	6
February 2002	50	25	5	20
August 2001	69	20	4	8
February 2001	33	20	22	5
August 2000	70	57	23	31
February 2000	38	31	46	15

### STATISTICS:

A total of 104 operators took the examination in 2004 of which 19 passed for an overall passing rate of 18 percent. As shown in the above table, the passing percentages for all grades have been fluctuating in recent years.

During the past 5 years, passing percentages for Grade 1 ranged from 33% to 80%, Grade 2 ranged from 0% to 63%, Grade 3 ranged from 0% to 46%, and Grade 4 ranged from 4% to 31%.

## ASSOCIATION OF BOARD OF CERTIFICATION EXAMINATION (ABC) PASSING PERCENTAGE COMPARISON

<b>Hawaii's vs National Average</b>	<b>Grade 1</b>	<b>Grade 2</b>	<b>Grade 3</b>	<b>Grade 4</b>
Hawaii's 2004 Average	36	20	26	10
Hawaii's 2003 Average	67	53	26	16
Hawaii's 2002 Average	67	41	10	14
Hawaii's 2001 Average	54	20	12	7
Hawaii's 2000 Average	56	44	37	23
National 2003 Average	66	52	38	41

The average passing rates for Grades 1 and 2 were particularly low during the year as compared to past years for no apparent reasons. The passing rates for all Grades are below the national average.

Operators have been encouraged to enroll in correspondence courses provided by California State University Sacramento (CSUS) and in courses offered by the Statewide Wastewater Operator Training Center. Only a minority of the operators have enrolled and completed the CSUS correspondence courses and only a fraction of the operators are attending classes offered by the Training Center.

The ABC Certification Examinations questions reference the courses offered by CSUS. Analysis has proven that the majority of the operators who have completed the CSUS courses and have taken courses offered by the training center are passing the ABC Certification examinations.

## STATEWIDE WASTEWATER OPERATOR TRAINING CENTER

The State Department of Health established the training center 16 years ago in September 1988. During 2004, the training center conducted 61 training sessions statewide to 450 registrants.

Training courses included introductory basic wastewater courses to more complex advanced courses such as activated sludge, sludge conditioning and anaerobic digestion.

The Board of Directors of the Training Center has placed great emphasis in improving the quality of the training program. In recent years, additional training videotapes, textbooks, interactive CD-ROMs, and a new study guide for the certification examination refresher course were purchased to enhance the learning opportunities afforded to operators. Desktop computers have been purchased for the neighbor island counties. Recent purchases of multi-media projectors were also purchased for the outer islands as instructors are beginning to use Power Point presentations.

An analysis of all exam participants who have successfully completed wastewater treatment plant operator courses with the training center have significantly better results than those who did not participate in the training program.

## JOINT MEETING

The Board of Certification meets on an annual basis in November with the Board of Directors of the Statewide Wastewater Operator Training Center to discuss issues pertaining to the training and certification program. These annual meetings have been beneficial and will be continued. The Boards agree the passing percentages of the exams could improve. The counties, especially the outer islands, have been encouraged to implement additional training and refresher courses for their personnel.

## WASTEWATER BRANCH, DEPARTMENT OF HEALTH

The Construction and Operations Section of the Wastewater Branch has assisted the Board in providing information and vital data of all wastewater treatment plants (WWTP) requiring classification. The Board currently maintains a computer file of 175 WWTPs in the state.

## OTHER SERVICES PROVIDED BY THE BOARD OF CERTIFICATION

Services	2000	2001	2002	2003	2004
Total number of operators:					
Permanent Certifications	461	466	460	420	420
Conditional Certifications (Two year renewals)	14	14	8	6	6
Requests for temporary certificates	6	12	3	9	12
Requests for reciprocity certificates	6	7	3	7	2
Evaluation of college transcripts, etc. for CEUs	21	15	14	12	19
Classification of Treatment Plants	12	28	14	15	9

A number of wastewater treatment plant operators have completed college/university courses. The Board evaluated courses related to the wastewater profession and awarded appropriate “continuing educational unit” (CEU) credit to operators applying for exams. CEUs are required as part of the educational requirements for certification examinations in addition to work experience. The recent amendments to HAR Chapter 11-61 changed the renewal period for active operator certificates to every two years instead of annually. This change allows the Board to reduce paperwork and costs for annual renewals and be compatible with other member states of the Association of Board of Certification (ABC). The 2 CEU renewal requirement also increased the number of requests reviewed by the Board to determine CEU credits for college transcripts and short courses taken by operators.

## SIGNIFICANT BOARD ACTIONS

The primary goal of the certification program is to ensure that all wastewater treatment plants are operated by qualified personnel. During the year, the Board achieved the following objectives:

1. Continued to review and determine the number of CEUs credited for satisfactory completion of new training courses offered by the training center and other institutions;
2. Continued to classify or reclassify wastewater treatment facilities throughout the state;
3. Resolved concerns submitted by operators regarding applications and qualifications for examination, and the new certificate renewal requirements;



4. Continued efforts to inform operators of the Board's functions and decisions via minutes of the Board meetings. Meetings are open to any operator interested in making a presentation before the Board;
5. Continued utilizing ABC Services for the development and scoring of the bi-annual certification examinations. The ABC Services standardized examinations consist of 100 questions which are selected by Board members from a pool of questions provided by ABC Services for each grade level. Scoring 70 percent or higher on the exam is required to pass the exam;
6. Evaluated three applications for reciprocity from out-of-state operators;
7. Held an annual joint meeting with the Board of Directors of the Statewide Wastewater Operator Training Center which was considered beneficial for both Boards. Proposals from these annual joint meetings have improved the training and certification programs;
8. Continued to provide information to operators and other agencies about the certification program, lists of CEUs/training earned, issuance of certificates and other matters such as the renewal of licenses;
9. Reviewed and updated all forms and related instructional sheets;
10. Implemented amendments to Hawaii Administrative Rules (HAR), Title 11, Chapter 61, Mandatory Certification of Operating Personnel in Wastewater Treatment Facilities, dated January 20, 2002; and
11. Reviewed and approved applications for renewal of operator certificates.

### SCHEDULE OF MEETINGS FOR YEAR 2005

The Board has scheduled six (6) meetings for the coming calendar year in:

January	May	September
March	July	November

General business to be conducted at these meetings include:

1. Providing an informational meeting for operators in attendance;
2. Reviewing and processing applications for certification examinations and discussing the results of the exams;
3. Previewing and preparing responses to correspondence received from operating personnel and other related agencies;

4. Reviewing and approving operator applications for temporary certificates;
5. Reviewing and issuing reciprocity certifications to qualifying operators from other states; and
6. Reviewing and approving operator certificate renewals.

EXPENDITURES DURING THE YEAR (July 2003 to June 2004):

Object Code	Title	Cost
3020	ABC Examinations	\$4,124
3510	Membership Dues	900
4210	Airline Coupons	2,560
4310	Travel Per Diem	1,355
4610	Car Rental	413
	Total	\$9,352

FUNDING SOURCE FOR THE BOARD

Act 238, SLH 1999 amended Chapter 340B, Hawaii Revised Statutes (HRS) which established the Wastewater Treatment Certification Board (WTCB) Special Fund. The revenues for this fund are generated from monies collected for registration, renewal, reciprocity and temporary certificate fees and are to be used specifically for financing the operations of the Board. During the fiscal year, revenues from certification fees and interest generated \$19,950.00 of additional funds. At the close of the fiscal year, a cash balance of \$33,765.71 existed in the fund.